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MEMORANDUM FOR: Charles J. Haughney, Chief, Fuel Cycle Safety Branch,
 Division of Industrial & Medical Nuclear Safety, NMSS

FROM: William L. Axelson, Deputy Director, Division of Radiation
 Safety and Safeguards, Region III

SUBJECT: MAINTENANCE INSPECTION FINDINGS AT COMBUSTION ENGINEERING
 (SNM-33, 70-0036)

We recently completed a special maintenance inspection at the subject licensee during the week of September 23-27, 1991. The purpose of the inspection was to examine the licensee's maintenance practices as it related to the recent findings from the IIT inspection at GE Wilmington. The Division of Reactor Projects (RIII) provided our division the necessary staff resources. We found this inspection to be beneficial to us and the licensee, as several programmatic weaknesses were discovered. However, the current license does not require maintenance procedures or practices which we have come to expect.

Enclosed is a report detailing our findings and recommendations for your use. We recommend our findings be considered as part of the license renewal, which is currently in process. Although the licensee's maintenance program (backlog, downtime, etc) generally works very well, it is an informal program which primarily relies on a experienced work crew with little or no procedures. With the advent of facility revitalization, larger quantities of oxide is being processed, stored and transported, and plans are being discussed to expand operations in fuel fabrication. As such, a skilled and veteran crew could retire and with it so goes the good maintenance program. Should you have questions regarding this inspection, please contact Mr. George France or Ms. Sonia Burgess of our office.

ORIGINAL SIGNED BY W. L. AXELSON

William L. Axelson, Deputy Director
 Division of Radiation Safety and
 Safeguards

Enclosure: As stated

bcc w/enclosure:
 A. B. Davis
 C. J. paperiello

bcc: *UNCLAS*

RIII *yes*
WLA
 Axelson/mm
 11/8/91

RIII
SIM III RES
 France
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RES
GF
 GEORGE

L-66

ENCLOSURE

DRAFT

DOCKET NO: 70-0036
LICENSE NO: SNM-33
LICENSEE: Combustion Engineering, Inc.
Hematite, Missouri
SUBJECT: LICENSE CONDITION: DEVELOP DETAILED WRITTEN
GUIDELINES/PROCEDURES FOR PERFORMING MAINTENANCE
TASKS

BACKGROUND

On September 23-27, 1991, the region made an evaluation and assessment of maintenance at the licensee's Hematite facility. This was accomplished by observing the material condition of the plant, reviewing the maintenance program and program implementation for both corrective and preventative maintenance, management control of maintenance, and reviewing maintenance records.

The inspectors determined that the completion of maintenance tasks relied heavily on personnel experience. Detailed written guidelines and/or procedures do not exist. The maintenance crew is experienced in both maintenance and plant operations and relies on this experience along with vendor manuals to perform most tasks. This is particularly true in instrument maintenance. Nevertheless, the inspectors concluded that the system in place seems to work as evidenced by a limited backlog. With the exception of two minor process upsets (involving failures in the steam hydrolysis system and subsequent release of small quantities of uranium hexafluoride) no significant precursor incidents have been directly attributed to maintenance issues. This covers the January 1984 through September 1991 operating period.

MAJOR CONCERN

With the advent of plant revitalization, larger quantities of uranium oxide is now being processed, transported and stored in large diameter equipment (equipment not normally suited to safe geometry for storing fissionable material). For criticality safety, uranium oxide is processed under moderation control which requires the maintenance of moisture measurement instruments (1 % moisture limit on uranium oxide). This leads to the following concern:

Although the calibrations of general instrumentation and instruments used for measuring moisture were performed when done as-found and as-left data were not recorded. Data should disclose that an instrument is within or outside

the calibration range/tolerance. Without a written procedure or guideline, or recorded history of instrument performance, a less experienced worker would be unable to track instrument trending, or changes in instrument performance.

The licensee readily admits that there are limited written procedures for performing instrument maintenance and other maintenance. However, the region acknowledges that the license does not specifically tie-down maintenance procedures as a requirement.

Currently, maintenance is being performed by a skilled and veteran crew. However, attrition may deplete the maintenance department over the next three to five years. If indeed CE Hematite expands operations in order to tool-up for fuel fabrication, an expanded program for maintenance services will follow. The region believes that the development and implementation of written guidelines and procedures can ease this transition.

RECOMMENDATION

The Region III staff recommends that an additional condition be incorporated into the license to assure that maintenance procedures and guidelines are written, implemented and audited by management oversight; that administrative procedures describe management controls and the maintenance process; that records of calibrations are explicit in disclosing as-found and as-left data; and that acceptance criteria be included in the procedures.